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## 9 ways YOU can achieve energy independence!

By Sue Sturgis

News on the climate and energy front continues to be bad--top scientists with impeccable credentials say human activity is causing a warming trend that will end 5,000 years of climatic stability, resulting in melting icecaps, rising oceans, and the deaths of millions of species and hundreds of thousands of people.

Sheesh. What can anyone do?

The answer: Lots. It's about all of us taking small and medium steps at home that will reduce the demand for energy--and the fossil fuels we burn so voraciously to create it. It's little things, and it's not hard. But multiplied by thousands of people or more, it's more than enough to stem the tide. And time's running out.

We've assembled nine solid ways for anyone in North Carolina to start solving the problem. Some don't cost anything at all. Some cost a little but do a lot. And some are more expensive, but will save you money in the long run (more and more as energy prices skyrocket).

So this Fourth of July week, here's the *Independent Weekly's* guide to proclaiming your energy independence.

### 1. Sign up for GreenPower

A growing number of North Carolina residents are financing increased production of energy from renewable sources, and it's easy to join them by signing up with N.C. GreenPower.

Launched three years ago, N.C. GreenPower is the first statewide green energy program in the nation supported by all the state's utilities--from big producers like Progress and Duke Energy to small, rural electrical cooperatives. We can sign up through our electric company, which adds a tax-deductible



Skylights at Heritage Middle School in Wake Forest help energy efficiency.  
Photo courtesy of Innovative Design

contribution to our monthly bill. The program is administered by Advanced Energy, a Raleigh-based nonprofit that the N.C. Utilities Commission founded in 1980 to implement new technologies for energy conservation and efficiency.

The typical residential N.C. GreenPower contribution of \$4 per month adds one block of 100 kilowatt-hours of cleaner energy to North Carolina's power supply, thus helping reduce the need for polluting power from coal burning or nuclear fission. Large-volume energy users, usually from the corporate sector, may contribute toward 100 or more blocks at \$2.50 per block.

N.C. GreenPower supports energy producers of all sizes throughout the state--from families with solar photovoltaic panels on their homes to municipal landfills and industrial animal farms that generate power from methane emissions. The program expects to add several wind producers this year. Solar producers currently receive about 4 cents per kilowatt-hour from their utility and another 18 cents from N.C. Greenpower, a financial incentive that helps make the costly technology more attractive.

Some environmentalists have criticized N.C. GreenPower's large-volume product for including hydroelectric dams, burning of waste wood products and direct combustion of animal waste, all of which have negative ecological impacts. Critics include the Canary Coalition, an Asheville-based clean air advocacy group. "But this is not a good reason to throw out the baby with the bath water," says Avram Friedman, the coalition's director. "The small-volume product provides us with a chance to make something very good happen."

N.C. GreenPower currently has about 7,800 residential subscribers and about a dozen corporate subscribers, says spokesperson Jeff Brooks. Those numbers are expected to grow this year as the program undertakes a big fall marketing campaign.

The program's customers subscribe to more than 14,000 blocks of renewable energy each month, the annual equivalent of about 17 million kilowatt-hours. That saves about 14 million pounds of coal from being burned and prevents the emissions of more than 35 million pounds of carbon dioxide. The amount of renewable energy a single residential subscriber supports over the course of a year offsets as much carbon dioxide as not driving a car 3,000 miles.

Besides promoting the production of cleaner energy, N.C. GreenPower also encourages energy conservation through simple, common-sense measures such as replacing ordinary light bulbs with compact fluorescents, installing programmable thermostats and replacing old energy-wasting appliances with more efficient Energy Star models.

"These are really great ways to save energy without disrupting your life," says Brooks. "Then you can use the money saved to support green energy."

## 2. [Get a home energy audit](#)

North Carolina's utilities are projecting an eye-popping 50 percent increase in electricity generation from polluting sources over the next 20 years--but their projections are based on the assumption that we will continue to squander energy through wasteful habits. It doesn't have to be like that. With a few simple and relatively inexpensive steps, we can dramatically reduce the amount of energy we use in our homes, workplaces and congregations.

Take the example set by Bob and Linda Rodriguez of Wake County. They have been living in their 30-year-old, two-story home north of Raleigh for 10 years now. Several years ago they began attending Raleigh's Pullen Memorial Baptist Church and taking classes there on earth care, where they learned about the devastating impacts of mountaintop coal mining in Appalachia and uranium mining on indigenous people's lands. Realizing that their demand for energy was destroying someone else's home, they resolved to become more responsible energy consumers.

Linda admits to feeling overwhelmed at first as they contemplated all they needed to do. "But if you just take a piece at a time, you can make a big difference," she says.

The Rodriguezes started with an energy audit from Southern Energy Management, a Raleigh-based company that helps homeowners and builders make their houses more energy-efficient. Many contractors and utility companies offer similar services, and there's even a do-it-yourself Home Energy Saver audit developed by the Lawrence Berkeley National Laboratory online at [hes.lbl.gov](http://hes.lbl.gov).

Southern Energy found several places where outside air was blowing into the Rodriguezes' home, so they sealed those spots with insulation. The couple switched to compact fluorescent light bulbs, which use 75 percent less electricity than incandescent bulbs. They also replaced leaky ductwork, sealed the crawl space, insulated electrical outlets and doors, installed door sweeps, got a solar hot water heater and insulated the hot water line, switched to energy-efficient appliances, and installed automatic thermostats.

The Rodriguezes estimate they spent a total of \$11,000 on the project, but they recouped \$2,000 immediately thanks to a state tax credit for the solar hot water system. In return, they're not only using less energy but will also enjoy cost savings over time, as their monthly electric bill has dropped by about 20 percent. And their home is even more comfortable since they've eliminated drafts. Their next step will be to start generating their own electric power with solar photovoltaic panels.

"For the price of a flat-panel television, we've helped reduce the need for mountaintop removal," Bob says. "We're doing our part to make somebody else's community a better place to live."

### 3. Design sustainable new homes

In far too many cases, our homes are energy hogs. Poorly insulated and inefficiently heated and cooled, they are major contributors to energy waste and greenhouse gas pollution. Fortunately, a growing number of Triangle-area architects and builders are taking steps to make our homes part of the energy solution rather than the energy problem.

One of  
the  
most



The nation's first Mainstream GreenHome to be built in a regular subdivision is off Blue Ridge Road in Raleigh.  
Photo by Derek Anderson

hopeful initiatives in terms of sheer scope is under way on an upscale cul-de-sac off Blue Ridge Road in northwest Raleigh, where Cherokee Investment Partners is constructing the first Mainstream GreenHome built in a typical suburban subdivision.

Founded in 1993, Cherokee is a Raleigh-based private equity firm that acquires environmentally contaminated "brownfield" properties for remediation and redevelopment, in many cases as housing

subdivisions. Cherokee currently holds about \$1 billion in real estate and expects to build tens of thousands of new houses on the properties it's currently rehabilitating.

"We woke up about two years ago and realized we are in a position of controlling more and more real estate around Europe and North America," says Cherokee Senior Director Jonathan Philips. "We're doing a good job cleaning up contaminated sites and revitalizing communities, but we hadn't focused on what we were putting on those sites. So we decided we needed to get smarter about green building."

Concluding the best way to learn was by doing, the company looked for someone who was building a new home so they could, as Philips puts it, "hijack" the process. Because Philips and his wife were about to build a house, they volunteered.

Corban Homes is constructing the Philips' house according to the National Association of Home Builders' Model Green Home Building Guidelines—one of only three homes in the nation known to meet those guidelines. (The others are non-subdivision homes in Albuquerque, N.M., and State College, Pa.) The house also will be certified with the Energy Star program administered by the U.S. Environmental Protection Agency and Department of Energy, and with the N.C. Healthy Built Homes Program, a collaboration involving the N.C. Solar Center, State Energy Office and local building professional organizations.

When it's completed later this year, the house will look like a typical suburban home. However, it will incorporate numerous sustainable energy features: high-tech insulation, reflective roofing, a sealed attic and crawl space, skylights, automatic window blinds, ground source heat pump, a solar hot water system that runs beneath the shingles, electricity-generating photovoltaic cells integrated into those shingles, and a lighting system that uses energy efficient LEDs and compact fluorescents. The N.C. Botanical Garden is designing the landscape to minimize energy use by mitigating the effects of sunlight and wind. Piedmont Biofuels (see below) is even providing an onsite biodiesel tank to fuel construction vehicles.

Because it pulls out all the sustainability stops, Raleigh's Mainstream GreenHome costs more than a conventional home or even a home incorporating basic green features, though Philips expects to recoup the costs through utility savings and appreciation. But to him, the extra expense is worth it since the home will serve as a model to challenge misconceptions that green building is ugly or hard to live with. And in the future, Cherokee will enjoy volume discounts as it begins applying sustainability principles to entire subdivisions.

"As a country, we haven't spent enough time thinking about sustainable design on a large-scale basis," Philips says. "We're signaling to the marketplace that green building is important."

#### 4. Build smarter schools

Like many other fast-growing communities across North Carolina and the nation, Wake County is struggling to fund adequate classroom space to keep up with its burgeoning student population. The debate over how to meet the need for new schools has focused largely on how much to raise property taxes to pay for new construction. Largely missing from the discussion has been any consideration of the enormous energy costs involved in powering conventional school buildings—and the ongoing savings available if the structures are designed in an energy-smart way.

Mike Nicklas is working to change that. An N.C. State-trained architect and founder of the 29-year-old Raleigh-based firm Innovative Design, he has helped plan more than 90 schools across the nation, incorporating elements to make the buildings more energy efficient. His work has won numerous awards. Last year, for example, the Sustainable Buildings Industry Council in Washington named Wake County's Nicklas-designed Heritage Middle School as the nation's most exemplary sustainable building.





The pond at Heritage Middle School in Wake Forest purifies water running off parking lots. The windmill powers a pump that creates bubbles to stave off mosquitoes.

Photo courtesy of Innovative Design

At first glance, the sprawling brick structure near downtown Wake Forest looks like a typical modern school. But a closer look reveals a roof-mounted solar hot water system supplying the cafeteria, photovoltaic panels that reduce the building's demand for outside power, and extensive classroom daylighting that provides soft illumination for learning without the glare and heat of conventional fixtures. Besides energy efficient elements, the building also offers other sustainable features: nontoxic paint, recycled carpeting affixed with nontoxic glue, formaldehyde-free cabinetry, and rainwater collection systems for flushing toilets and irrigating playing fields. A one-acre wetland pond collects and purifies water flowing off parking lots and other paved surfaces, with a windmill-powered pump providing bubbles to discourage mosquitoes.

While such sustainably designed schools cost anywhere from \$1 to \$2 more per square foot to build than conventional schools, the system recoups the extra expense in about two years through energy savings. Heritage, for example, saves \$40,000 per year in electric bills alone. And it's not the only Nicklas design saving Wake County money: His firm also designed Dillard Drive Elementary, Millbrook Elementary and Durant Road Middle School, which the American Institute of Architects in 1997 named one of the nation's 10 most environmentally friendly buildings. In nearby Johnston County, Nicklas and his colleagues designed Four Oaks Elementary, Clayton Middle and Selma Middle schools, which have proven to be among the lowest energy-consuming schools in the Southeast.

Innovative Design's schools don't benefit just the environment and taxpayer, either: They're also healthier for students. Studies have found that children who attend daylit schools have better attendance and improved mood as well as less tooth decay and faster growth due to higher levels of vitamin D. Research conducted by Nicklas and his colleague Gary Bailey also found that children who attended their daylit schools in Johnston County showed greater improvement on achievement tests than peers who attended conventional schools.

"It's so logical and simple to do," Nicklas says. "It just takes the right skills."

## 5. [Help transform energy policy](#)

While it's important for us to take steps as individuals and families and households to lessen our

dependence on dirty energy, we also need to take collective action as citizens to help shape wiser energy policy--especially at the state level.

"Our state laws have an overwhelming impact on the energy choices available to us," says Grady McCallie, a policy analyst with the Raleigh-based N.C. Conservation Network. "In practical terms, we won't be free to choose clean energy if state rules drive the utilities to meet all future demand through more expensive and polluting coal and nuclear plants."

North Carolina is tied for last in the nation in energy efficiency investment per unit of utility sales, according to McCallie. That's because under state law, our utilities get to pass on to consumers the cost of fuel and new power plants, so there's no incentive to tap low-cost energy efficiency rather than building costly new plants. In addition, our utilities make a profit on the total volume of energy sold rather than on how well each unit of energy is used, so there's no incentive to encourage efficiency.

"Until we change state policies to require energy efficiency to reward utilities for how intensively their power is used rather than how much they sell, economic incentives for utilities to sell more and more power will tend to overwhelm individual decisions to consume less," McCallie says.

Fortunately, state lawmakers are considering legislation that puts North Carolina on the path to greater energy efficiency. The Energy Independence Act (S. 2051)--sponsored by Sen. Charles Albertson (D-Duplin) and co-sponsored by Janet Cowell (D-Wake), Ellie Kinnaird (D-Orange) and Clark Jenkins (D-Edgecombe)--requires North Carolina to reduce petroleum use in state vehicles by 20 percent by 2010 through expanding the use of hybrids and alternative fuels. It creates tax credits to reduce the price of alternative fuels and to encourage the purchase of hybrid vehicles. The measure also requires state agencies to reduce energy consumption and offers tax credits for energy efficient homes. The bill is expected to come up for a vote within the next few weeks, McCallie says, so now would be a good time to weigh in with your representatives.

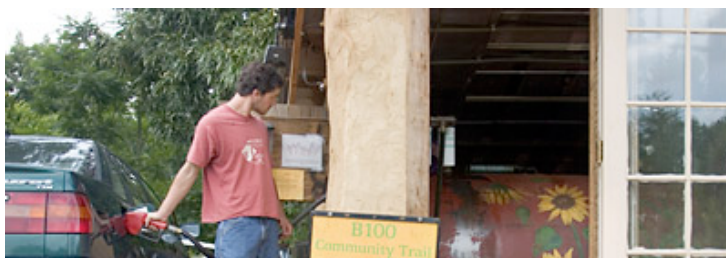
For more information about the Energy Independence Act and other key legislation promoting energy sustainability, download a copy of the "2006 North Carolina Sustainable Energy Legislative Guide" from the N.C. Sustainable Energy Association's Web site at [www.ncsustainableenergy.org](http://www.ncsustainableenergy.org). Another good way for North Carolina citizens to stay informed about legislation promoting energy efficiency and other environmental matters is to sign up for the Conservation Network's public alerts at the group's Web site at [www.ncconservationnetwork.org](http://www.ncconservationnetwork.org).

## 6. Drive cleaner

Here in the United States, transportation accounts for nearly a third of our greenhouse gas emissions, second only to electrical generation. There are simple, free steps we can take immediately to reduce the pollution from our cars and trucks, such as driving less aggressively, keeping our tires properly inflated, reducing idling, cutting back on the number of short trips we make by vehicle, and walking or riding a bike instead. We can also give up our gas guzzlers and switch to more fuel-efficient models.

Another option is to end our dependence on fossil-fuel-powered vehicles altogether by running a diesel car or truck on biodiesel.

One of the leading promoters of biodiesel technology in the Triangle is the



Piedmont Biofuels Cooperative in Chatham County, one of the largest biofuels co-ops in the nation with about



Matt Rudolf, executive director of Piedmont Biofuels, fills up with biodiesel at the plant outside Pittsboro. Photo by Derek Anderson

300 members. Located on an old farmstead inside a formerly abandoned doublewide trailer, the co-op produces biodiesel from used vegetable oil--in their case, fryer oil from eateries in Durham's Southpoint Mall--in a chemical process whereby glycerin is separated from fat. The beauty of purified biodiesel is that it runs in an ordinary diesel engine, with few or no modifications necessary. (Biodiesel does have a solvent effect, however, and can loosen filter-clogging deposits and degrade rubber components in older engines.)

A 1998 federal study concluded that biodiesel reduces net carbon dioxide emissions by 78 percent compared to petroleum diesel due to biodiesel's closed carbon cycle. That is, the CO<sub>2</sub> released into the atmosphere when biodiesel burns is recycled by growing plants, which are later processed into fuel. Burning biodiesel also releases less toxic pollutants and particulate matter than burning petroleum diesel, and it has a high energy balance, meaning it produces far more energy than it takes to make it.

That's especially true at the co-op, where the production process is ingeniously designed for maximum sustainability. The used oil is initially warmed with passive solar heat. The building where processing takes place is heated with solar-warmed hot water. Donated solar roof panels provide electricity. The glycerin extracted in the purification process is composted and used to fertilize the co-op's oil-crop research farm, which in turn is watered with process wastewater cleaned via an artificial wetlands system built from old bathtubs. During Sunday afternoon open houses, the co-op sells T-shirts, coffee cups and co-founder Lyle Estill's book *Biodiesel Power* from a one-room shop constructed of straw bales, and the tank from which the co-op sells biodiesel to the public is housed in a passive solar shed constructed of cob, a blend of straw and local red clay. (At \$3.50 a gallon, biodiesel costs more than petroleum diesel, but that's because it doesn't yet enjoy the same government subsidies.)

At the moment, the fuel the co-op sells to the public is store-bought rather than homemade because of strict federal rules governing quality control. However, the co-op is currently finishing construction of a commercial production plant in nearby Pittsboro that will produce about 1 million gallons of biodiesel annually that will meet public-sale standards. Nevertheless, Estill cautions against thinking biodiesel is a magic bullet for fossil-fuel woes.

"A 1 million gallon operation is basically like a small country gas station--it can't even begin to meet the fuel needs of Americans," says Estill. "We've simply got to start driving less."

## 7. Get the fuel out of our food

We Americans tend to be calorie-obsessed--but how many of us have contemplated the fossil-fuel calories in the food we eat?

It takes about 10 fossil-fuel calories to produce and transport each food calorie in the average American diet. So if our daily food intake is 2,000 calories, it took 20,000 calories to grow that food and get it to us. Overall, about 15 percent of U.S. energy use goes toward supplying food, divided about evenly between producing crops and livestock, and food processing and packaging. David Pimentel, a professor of ecology at Cornell University, has estimated that if the whole world ate the way Americans eat, we

would exhaust all known fossil fuel reserves in seven years.

There are easy steps we can take to reduce our consumption of fossil-fuel calories, such as buying less processed food and more local products, shopping at local farmers' markets, or joining a community-supported agriculture farm. (For information on farmers' markets in North Carolina, go to the N.C. Farm Fresh Web site at [www.ncfarmfresh.com](http://www.ncfarmfresh.com), and for list of CSAs visit the Chatham County Cooperative Extension's Growing Small Farms Web site at [www.ces.ncsu.edu/chatham/ag/SustAg/csafarms.html](http://www.ces.ncsu.edu/chatham/ag/SustAg/csafarms.html).)

Another option is to grow more of our own food at home. An experiment to do just that is taking place in West Raleigh, where N.C. State horticultural science professor Will Hooker and his wife, soil scientist Jeana Myers, grow about 20 percent of the food they and their son, Eli, eat--all on an ordinary fifth-acre urban lot.

The couple gardens according to the principles of permaculture, a system for designing and maintaining ecologically sustainable human environments developed in the 1970s by Australian ecologists Bill Mollison and David Holmgren. Permaculture is an organic response to industrial agriculture practices that reduce biodiversity and require large inputs of petroleum-based pesticides and other toxic chemicals.

Hooker and Myers' home garden got under way in earnest in 2000, after the family returned from a 10-month trip around the world to visit permaculture projects and other organic gardens. Following permaculture teachings, the first thing they did was observe the land to understand shifting patterns of wind and light. Once they determined a suitably sunny spot for vegetables, they laid down a thick layer of mulch, let it decompose over the winter, and began planting the following spring. Next, they brought in chickens for eggs and manure, then gradually began adding plants.

Today the couple grow more than a dozen different fruits, including apples, blueberries, grapes, peaches and plums. A shady backyard nook shelters a row of neatly stacked oak logs bearing shiitake mushrooms. For nine months of the year, they grow all of their salad greens, and they accomplish this with about 10 hours of labor a week. They eventually hope to grow half of all their food.

Hooker and Myers believe that our energy-intensive way of life is coming to an end, and humanity faces a choice between a sudden crash or what they hope will be a "graceful descent" into a less energy-intensive paradigm. In working toward the graceful descent, they find inspiration in places like Hong Kong: Though it's one of the most densely populated places on earth, about 45 percent of all the fruits and vegetables consumed by residents are grown inside the city limits.

"If in our urban centers we can grow 45 percent of our fruits and vegetables," says Hooker, "we would save an amazing amount of energy."

## 8. Connect energy and spirit

Most spiritual traditions have an ethic of caring for creation, yet many of our religious institutions engage in wasteful and environmentally harmful energy-use practices. N.C. Council of Churches' Climate Connection initiative is working to repair that disconnect while at the same time moving the discussion on climate change from the realm of earthly politics to a higher plane.

Climate Connection was first convened in 2000 by the late Sister Evelyn Mattern, a Triangle area activist and member of the Sisters for Christian Community who passed away in 2003. The meeting was a response to an initiative led by the National Council of Churches' Eco-Justice Working Group to bring awareness of global warming to faith communities and to draw connections between the spiritual imperative of creation care and the devastating impact of climate change.

Since then, Climate Connection--now directed by Alice Loyd of Pullen Memorial Baptist Church--has



undertaken numerous efforts to promote awareness of climate change among North Carolina's faith communities. Last year the group became an affiliate of Interfaith Power & Light, a national campaign mobilizing a religious response to global warming while promoting renewable energy, energy efficiency and conservation.

Here in North Carolina, Climate Connection provides educational outreach, holding workshops offering scientific information on global warming and strategies for taking action at the individual, congregational and public policy levels. It also conducts workshops with other groups such as Clean Energy Durham, and it's helping low-income faith congregations reduce energy consumption in practical, affordable ways.

Loyd reports an upsurge in interest in her group lately, which she attributes at least in part to mainstream media finally beginning to publish information explaining the impact of climate change. Through Climate Connection, concerned people can get involved in solving the problem while avoiding the ugly politics that sometimes cloud the issue.

"For us, climate change is a moral issue because human suffering is involved," Loyd explains. "We're losing something valuable that present and future generations should be able to count on having--a safe place to live. We like to use the language 'care of creation' because it expresses the idea of caring for something that's a treasure, something that's sacred. It's so unrelated to politics."

## 9. Educate yourself

By now you may have seen *An Inconvenient Truth*, the powerful documentary about Al Gore's efforts to warn the world about the reality and consequences of global warming. The film has won the praise of eminent scientists such as Dean William Schlesinger of Duke's Nicholas School of the Environment, who've lauded its accurate portrayal of the crisis we face.

Now there's another must-see movie about global warming coming to the Triangle. On Tuesday, July 18, there will be a free showing of the award-winning film *Kilowatt Ours: A Plan to Re-Energize America* ([www.kilowattours.org](http://www.kilowattours.org)). The event will include a discussion with filmmaker Jeff Barrie as well as an exhibit of products, services and information related to clean energy in North Carolina. It takes place at the N.C. Museum of Natural Sciences at 11 W. Jones St. in Raleigh at 7 p.m.

The showing is part of a statewide tour of the film sponsored by an alliance of environmental and health advocacy groups promoting energy sustainability in North Carolina. The alliance includes the American Lung Association, Carolinas Clean Air Coalition, Environmental Defense, N.C. Conservation Network, N.C. Council of Churches, N.C. Solar Center, N.C. Sustainable Energy Association, N.C. Waste Awareness and Reduction Network and the Southern Alliance for Clean Energy.

The film opens with a speech by Vice President Dick Cheney in which he claims that America needs nearly 1,900 new power plants in the next 20 years to meet projected electricity demands. From there, Barrie takes viewers on a journey from the coal mines of West Virginia to the solar panel fields of Florida as he looks for solutions to America's dirty energy addiction.

The film also documents Barrie and his wife's efforts to eliminate their use of coal and nuclear power in their own home by employing energy conservation, energy efficiency and renewable energy sources. Through the Barries' experience, viewers will discover how we can save hundreds of dollars annually on our energy bills--and use the savings to support renewable energy.

## The cold, hard facts

As the Triangle dries out from the wettest June on record, a month that saw local folks rescued from flooded homes in rowboats, there's more worrisome news blowing in from the global climate front.

The results of a federally funded study published last month in the *Proceedings of the National Academy of Sciences* reports that Earth appears to be undergoing an abrupt warming, bringing an end to a cooler period that began 5,000 years ago and coincided--perhaps not so coincidentally--with the rise of cities. The authors expect that the planet's temperature will continue to climb, glaciers to melt, and sea levels to rise. Those revelations came on the heels of other studies indicating the Northern Hemisphere's recent warming is of a magnitude unmatched for the past 400 to 1,000 years, and that the warming is occurring more rapidly than scientists originally anticipated.

While it's true Earth undergoes natural cycles of warming and cooling, scientists say the dramatic warming trend we find ourselves in now is anything but natural. It's caused by pollution from heat-trapping carbon dioxide and other greenhouse gases that we humans are releasing to the atmosphere by burning fossil fuels such as coal and gas, and it's worsened by our clearing of carbon-absorbing forests.

The warming is already wreaking havoc. In the past 30 years, the number of severe hurricanes has almost doubled, partly as the result of warmer ocean water. Mosquito-borne malaria is spreading to ever-higher altitudes. Hundreds of species of plants and animals have shifted habitat, moving closer to the planet's poles. If the warming continues, we can expect human deaths from global warming to double in the next quarter-century to 300,000 lives lost each year. Global sea levels could rise by as much as 20 feet, with devastating consequences for North Carolina's coastal communities. From the Arctic come reports of polar bears drowning in a futile search for vanishing ice. By 2050, more than a million species could face extinction.

That's why it's so critical for us to take action immediately to rein in our carbon emissions--and stave off the worst of global warming's effects.

### [To learn more](#)

For more information about the initiatives profiled here as well as other efforts to build a more sustainable energy future for North C visit the following Web sites:

**Advanced Energy:**  
[www.advancedenergy.org](http://www.advancedenergy.org)

**N.C. Council of Churches' Climate Connection:**  
[www.nccouncilofchurches.org/areasofwork/committees/climate\\_connection/climate\\_conn](http://www.nccouncilofchurches.org/areasofwork/committees/climate_connection/climate_conn)

**American Lung Association of North Carolina:** [www.lungnc.org](http://www.lungnc.org)

**N.C. Division of Air Quality:**  
[www.ncair.org](http://www.ncair.org)

**Appalachian State University Energy Center:**  
[www.energy.appstate.edu](http://www.energy.appstate.edu)

**N.C. GreenPower:**  
[www.ncgreenpower.org](http://www.ncgreenpower.org)

**Canary Coalition:**  
[www.canarycoalition.org](http://www.canarycoalition.org)

**N.C. Healthy Built Homes Program:**  
[healthybulthomes.org](http://healthybulthomes.org)

**Carolina Electric Vehicle Coalition:**  
[www.evchallenge.org/about/cevc.html](http://www.evchallenge.org/about/cevc.html)

**N.C. Legislative Commission on Global Climate Change:**  
[www.ncleg.net/Committees/legislativecomm/default.htm](http://www.ncleg.net/Committees/legislativecomm/default.htm)

**Carolinas Clean Air Coalition:**  
[www.clean-air-coalition.org](http://www.clean-air-coalition.org)

**N.C. Sierra Club:**  
[www.sierraclub.org/nc](http://www.sierraclub.org/nc)

**Cherokee Investment Partners:**  
[www.cherokeefund.com](http://www.cherokeefund.com)

**N.C. Solar Center:**  
[www.ncsc.ncsu.edu](http://www.ncsc.ncsu.edu)

**Clean Energy Durham:**  
[www.cleanenergydurham.org](http://www.cleanenergydurham.org)

**N.C. Sustainable Energy Association:**  
[www.ncsustainableenergy.org](http://www.ncsustainableenergy.org)

**Conservation Council of North Carolina:**  
[www.serve.com/ccnc](http://www.serve.com/ccnc)

**N.C. Waste Awareness and Reduction Network:**  
[www.ncwarn.org](http://www.ncwarn.org)

**Piedmont Biofuels:**  
[www.biofuels.coop](http://www.biofuels.coop)

**Energy Star program:**

[www.energystar.gov](http://www.energystar.gov)

**Southern Alliance for Clean Energy:**

[www.cleanenergy.org](http://www.cleanenergy.org)

**Environmental Defense:**

[www.environmentaldefense.org](http://www.environmentaldefense.org)

**Southern Energy Management:**

[www.southern-energy.com](http://www.southern-energy.com)

**Environment North Carolina:**

[www.environmentnorthcarolina.org](http://www.environmentnorthcarolina.org)

**Southern Environmental Law Center:**

[www.selenc.org](http://www.selenc.org)

**Innovative Design:**

[www.innovativedesign.net](http://www.innovativedesign.net)

**State Energy Office of North Carolina:**

[www.energync.net](http://www.energync.net)

**Interfaith Power & Light:**

[www.theregenerationproject.org](http://www.theregenerationproject.org)

**Students United for a Responsible Global Environment:**

[www.surgenetwork.org](http://www.surgenetwork.org)

**National Association of Home  
Builders' Model Green Home  
Building Guidelines:**

[www.nahb.org/gbg](http://www.nahb.org/gbg)

**Sustainable Buildings Industry Council:**

[www.sbicouncil.org](http://www.sbicouncil.org)

**Sustainable North Carolina:**

[www.sustainnc.org](http://www.sustainnc.org)

**National Council of Churches'  
Eco-Justice Working Group:**

[www.ncccecojustice.org](http://www.ncccecojustice.org)

**Triangle Clean Cities Coalition:**

[www.trianglecleancities.org](http://www.trianglecleancities.org)

**N.C. Climate Action Plan  
Advisory Group:**

[www.ncclimatechange.us](http://www.ncclimatechange.us)

**UNC Sustainability Office:**

[sustainability.unc.edu](http://sustainability.unc.edu)

**N.C. Conservation Network:**

[www.ncconservationnetwork.org](http://www.ncconservationnetwork.org)

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